

- 23 Lammertsma AA, Baron JC, Jones T. Correction for intravascular activity in the oxygen steady state technique is independent of the regional hematocrit. *J Cereb Blood Flow Metab* 1987;7:372-4.
- 24 Pantano P, Baron JC, Crouzel C, Collard P, Sirou P, Samson Y. The ^{15}O continuous-inhalation method: correction for intravascular tracer using C^{15}O . *Eur J Nucl Med* 1985;10:387-91.
- 25 Sette G, Baron JC, Mazoyer B, Levasseur M, Pappata S, Crouzel C. Local brain haemodynamics and oxygen metabolism in cerebrovascular disease: positron emission tomography. *Brain* 1989;112:931-51.
- 26 Heiss WD. Experimental evidence of ischemic thresholds and functional recovery. *Stroke* 1992;23:1668-72.
- 27 Brunberg JA, Frey KA, Horton JA, Kuhl DE. Crossed cerebellar diaschisis: occurrence and resolution demonstrated with PET during carotid temporary balloon occlusion. *Am J Neuroradiol* 1992;13:58-61.
- 28 Jenkins WM, Merzenich MM. Reorganization of neocortical representations after brain injury: a neurophysiological model of the bases of recovery from stroke. *Prog Brain Res* 1987;71:249-66.

Walter Essex Wynter, Quincke, and lumbar puncture

Though Quincke's name is usually attached to the procedure of lumbar puncture, and rightly so, Walter Wynter, in the same year, devised a comparable if cruder technique.

Walter Essex Wynter (1860-1945) was educated at Epsom College, Surrey, and the Middlesex Hospital. He was the son of a general practitioner, Andrew Wynter, who practised in Chiswick and who edited the *British Medical Journal* (1855-61). Walter Wynter was FRCP and FRCS, becoming a physician to the Middlesex hospital in 1901.

While a registrar, he reported in *The Lancet*¹ four cases of CSF aspiration in meningitis. Case 1 was a boy aged three years, treated in February 1889 with meningitis following an ear infection. Case 2, treated in February 1890, was an 11-year-old girl; case 3 was a two-year-old boy and case 4 was a 13-month-old girl: the last three were all tuberculous.

Wynter made a small incision at L2, cut down to the dura, then inserted a Southey's tube with a rubber drainage to withdraw the infected fluid and reduce the pressure. The procedure afforded but short-lived relief and all four patients died. (Southey's tubes were still in occasional use in 1960, and were used to relieve gross dropsy in the legs which were left dependent overnight to drain litres of oedema fluid into a large bucket.)

Heinrich Irenaeus Quincke (1842-1922) was the son of a physician who practised in Berlin. He was born in Frankfurt-an-der-Oder, read medicine at Berlin, Würzburg and Heidelberg, becoming MD in 1863. Much influenced by his teacher Friederich Frerichs in Berlin, he took the Chairs in Berne and then in Kiel.

He studied gastrointestinal disorders, advocated surgery for lung abscess, and observed the angio-oedema of anaphylaxis, referred to as Quincke's oedema. He observed the pulsation of nailbed capil-

laries in aortic regurgitation (Quincke's sign). Studying the CSF in dogs and rabbits, he injected the red sulphide of mercury into the subarachnoid space to demonstrate the *flüssigkeit* or flow, in 1872. At Kiel he was concerned with the severe headaches associated with hydrocephalus and one month before Wynter's *Lancet* paper, he reported his first lumbar puncture in "*Ueber hydrocephalus*", to the Tenth Congress of Internal Medicine at Wiesbaden in April 1891.²

Case 1 was a boy of 12 years who died despite six punctures of the ventricles via a trephine, performed in 1888. Case 2 was a boy aged one year nine months, comatose with suspected tubercular meningitis. He performed three lumbar punctures at three-day intervals in December 1890:

I punctured the subarachnoid space in the lumbar area, passing a very fine cannula 2 cm. deep between the third and fourth lumbar spinal arches and drop by drop I drained a few cubic centimetres of watery fluid...one could see clearly increases with expiration and decrease with inspiration.

The child recovered and the nature of the meningitis or meningism remains uncertain. Case 3 was a man with chronic hydrocephalus aged 25, who suffered from severe headaches. These were relieved by lumbar puncture, but again the aetiology was not established. By 21 September, 1891 his paper³ included lumbar puncture in five children and five adults. He acknowledged Wynter's work.

JMS PEARCE
304 Beverley Road,
Anlaby, Hull
HU10 7BG

- 1 Wynter WE. Four cases of tubercular meningitis in which paracentesis was performed for the relief of fluid pressure. *Lancet* 1891;1:981-2.
- 2 Quincke HI. Ueber hydrocephalus. *Verhandlung des Congress Innere Medizin (X)*, 1891;321-39.
- 3 Quincke HI. Die lumbalpunktion des Hydrocephalus. *Berl Klin Wochenschr* 1891;28:929-33.